

Revision Notes
CHAPTER – 4
Sorting Material into Groups

Matter : Anything that occupies space and has mass is called matter. Objects around us are made up of a large variety of materials.

Material : A material is a substance which is used for making things.

A given material could be used to make a large number of objects. It is also possible that an object could be made of a single material or of many different types of materials.

GENERAL PRPERTIES OF MATERIAL

(A) Appearance : shine (luster or luster) or Roughness (non- lustrous)

- All metals are **lustrous** , some are more and some are less.
- wood, rubber or a piece of rock is **non-lustrous**.

(B) . Hardness ; Hard and soft

- Rocks, iron and many metals are **hard**.
- Hard materials may be :

1. **Brittle** ;- Which break into smaller pieces or are powdered when hammered, ex. rock, glass, salt.
2. **Malleable** : which spread into sheets when beaten . metals are malleable.
3. **Ductile** :- they can be drawn into thin and long wires. metals are ductile.

- materials like wood, rubber and fibres are **soft**.

(C) Thorough visibility :-

- Transarent :- object through which light may pass .ex. glass some plastic , sugar and salt solution in water.
- Transluscent :- object through which light may pass partially.ex. milky glass, milk.

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- Opaque :_ object through which light does not pass.ex. wood, metals, rock,wall.

(D) Good and bad conductor of electricity :-

- material through which electric current can pass easily are the good conductors of electricity. metals are good conductors of electricity.
- wood, plastic,rubber, cork and certain materials are bad conductors of electricity.electric current does not pass through them.

(D) Good and bad conductor of heat :-

- All metals are good conductors of heat.
- wood are bad conductors of heat.

(E) combustible substances :- The materials which catch fire on heating are combustible substance. wood, lastic,fibre and paper are combustible substance.

(F) SOME MATERIAL MAY FLOAT AND SOME SINK IN WATER.

material which sinks in water is denser than water.

material which floats on water is less dense than water.

(G) SOLUBILITY O A SUBSTANCES IN WATER.

- The substnecs like salt and sugar , which disappear in water , are said to be **soluble**.
- The substances which remain as such and do not disappear in water are said to be **insoluble** in water.

(H) Miscible and Immiscible Liquid :-

- when two liquids are mixed and they do nort mixed well, they are said to be **immiscible**.
- The liquids which mix well with water are said to be **miscible**.

GROUPING OF MATERIALS.

- Things made from wood
- Things made from fibre

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- Things made from metal
 - Things made from ceramic
 - Things made from glass
 - Things made from plastic
 - Things made from rubber
 - things that are liquids such as oil.
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Materials are grouped together on the basis of similarities and differences in their properties.

Things are grouped together for convenience and to study their properties.

Advantages of classification:

(a) Helps in identification of objects.

(b) Helps in sorting of objects.

(c) Helps in locating things.

(d) Makes study of different objects easy and more meaningful rather than studying each other separately.

(e) Helps to understanding similarities and dissimilarities among objects.